

IN SEARCH OF AN ENDURING MILITARY THEORY:  
EXAMINING THE US ARMY'S PRINCIPLES OF WAR

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE

by

JON S. CLEAVES, MAJ, USA  
BS, USMA, West Point, New York, 1984  
MS, JMIC, Washington, D.C., 1989

Fort Leavenworth, Kansas  
1997

Approved for public release; distribution is unlimited

19971114 067

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 6 June 1997		3. REPORT TYPE AND DATES COVERED Master's Thesis, 4 Aug 96-6 Jun 97
4. TITLE AND SUBTITLE In Search of an Enduring Military Theory: An Examination of the US Principles of War ARMY'S			5. FUNDING NUMBERS	
6. AUTHOR(S) Major Jon S. Cleaves, US Army				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  US Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-1352			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT  Approved for Public Release; distribution is unlimited			12b. DISTRIBUTION CODE  A	
13. ABSTRACT (Maximum 200 words)  This study examines the US principles of war to see if they are potential candidates as the foundation for a timeless and universal military theory. Each is compared to similar fundamental statements made by past military theorists to ensure it is not tied to the twentieth century specifically. Then, each is compared to the military fundamentals of representative cultures from around the world to see if it is unique to American experience. Those principles that survive this process are recommended for consideration as the foundation of a permanent, enduring military theory that can be used as a basis for doctrinal changes as threats and capabilities change in the future. If the US Army had such a theory, doctrinal changes could be made with it as a baseline without having to "reinvent the wheel" with each technological change or threat reorientation. This study recommends the use of six of the eleven principles of war from the 1997 draft of FM100-5 as the potential basis for an enduring military theory, incorporates two of the existing principles into one of the survivors and recommends three be dropped from the list of theoretical fundamentals.  <b>DTIC QUALITY INSPECTED 2</b>				
14. SUBJECT TERMS  principles of war, military theory, doctrine			15. NUMBER OF PAGES 72	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UNCLASSIFIED	

## GENERAL INSTRUCTIONS FOR COMPLETING SF 298

The Report Documentation Page (RDP) is used in announcing and cataloging reports. It is important that this information be consistent with the rest of the report, particularly the cover and title page. Instructions for filling in each block of the form follow. It is important to ***stay within the lines*** to meet ***optical scanning requirements***.

**Block 1. Agency Use Only (Leave blank).**

**Block 2. Report Date.** Full publication date including day, month, and year, if available (e.g. 1 Jan 88). Must cite at least the year.

**Block 3. Type of Report and Dates Covered.** State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g. 10 Jun 87 - 30 Jun 88).

**Block 4. Title and Subtitle.** A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume, repeat the primary title, add volume number, and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

**Block 5. Funding Numbers.** To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

<b>C</b> - Contract	<b>PR</b> - Project
<b>G</b> - Grant	<b>TA</b> - Task
<b>PE</b> - Program Element	<b>WU</b> - Work Unit Accession No.

**Block 6. Author(s).** Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

**Block 7. Performing Organization Name(s) and Address(es).** Self-explanatory.

**Block 8. Performing Organization Report Number.** Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

**Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es).** Self-explanatory.

**Block 10. Sponsoring/Monitoring Agency Report Number.** (If known)

**Block 11. Supplementary Notes.** Enter information not included elsewhere such as: Prepared in cooperation with...; Trans. of...; To be published in.... When a report is revised, include a statement whether the new report supersedes or supplements the older report.

**Block 12a. Distribution/Availability Statement.** Denotes public availability or limitations. Cite any availability to the public. Enter additional limitations or special markings in all capitals (e.g. NOFORN, REL, ITAR).

**DOD** - See DoDD 5230.24, "Distribution Statements on Technical Documents."

**DOE** - See authorities.

**NASA** - See Handbook NHB 2200.2.

**NTIS** - Leave blank.

**Block 12b. Distribution Code.**

**DOD** - Leave blank.

**DOE** - Enter DOE distribution categories from the Standard Distribution for Unclassified Scientific and Technical Reports.

**NASA** - Leave blank.

**NTIS** - Leave blank.

**Block 13. Abstract.** Include a brief (*Maximum 200 words*) factual summary of the most significant information contained in the report.

**Block 14. Subject Terms.** Keywords or phrases identifying major subjects in the report.

**Block 15. Number of Pages.** Enter the total number of pages.

**Block 16. Price Code.** Enter appropriate price code (*NTIS only*).

**Blocks 17. - 19. Security Classifications.** Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

**Block 20. Limitation of Abstract.** This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

IN SEARCH OF AN ENDURING MILITARY THEORY:  
EXAMINING THE US ARMY'S PRINCIPLES OF WAR

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE

by

JON S. CLEAVES, MAJ, USA  
BS, USMA, West Point, New York, 1984  
MS, JMIC, Washington, D.C., 1989

Fort Leavenworth, Kansas  
1997

Approved for public release; distribution is unlimited

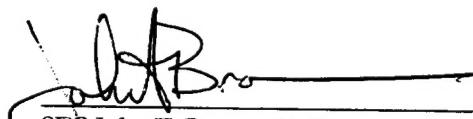
MASTER OF MILITARY ART AND SCIENCE

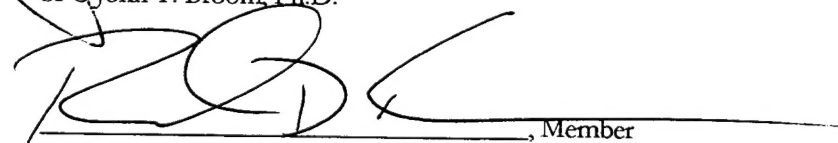
THESIS APPROVAL PAGE

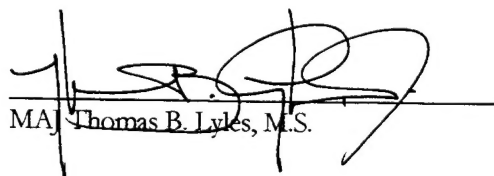
Name of Candidate: MAJ Jon S. Cleaves

Thesis Title: In Search of an Enduring Military Theory: Examining the US Army's Principles of War

Approved by:

  
SFC John T. Broom, Ph.D., Thesis Committee Chairman

  
LTC Richard D. Graham, M.A., Member

  
MAJ Thomas B. Lyles, M.S., Member

Accepted this 6th day of June 1997 by:

  
Philip J. Brookes, Ph.D., Director, Graduate Degree Programs

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

## ABSTRACT

IN SEARCH OF AN ENDURING MILITARY THEORY: EXAMINING THE US  
PRINCIPLES OF WAR by MAJ Jon S. Cleaves, USA, 85 pages.

This thesis examines the US principles of war to see if they are potential candidates as the foundation for a timeless and universal military theory. Each is compared to similar fundamental statements made by past military theorists to ensure it is not tied to the twentieth century specifically. Then, each is compared to the military fundamentals of representative cultures from around the world to see if it is unique to American experience.

Those principles that survive this process are recommended for consideration as the foundation of a permanent, enduring military theory that can be used as a basis for doctrinal changes as threats and capabilities change in the future. If the US Army had such a theory, doctrinal changes could be made with it as a baseline without having to “reinvent the wheel” with each technological change or threat reorientation.

This thesis recommends the use of six of the eleven principles of war from the 1997 draft of FM100-5 as the potential basis for an enduring military theory, incorporates two of the existing principles into one of the survivors and recommends three be dropped from the list of theoretical fundamentals.

## TABLE OF CONTENTS

	Page
APPROVAL PAGE.....	ii
ABSTRACT.....	iii
CHAPTER	
1. INTRODUCTION.....	1
2. RESEARCH DESIGN .....	9
3. ANALYSIS.....	14
4. CONCLUSIONS.....	57
BIBLIOGRAPHY.....	64
INITIAL DISTRIBUTION LIST .....	68

## CHAPTER 1

### INTRODUCTION

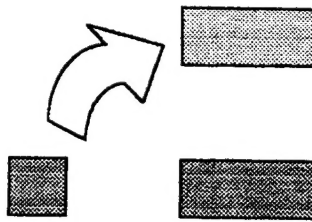


Figure 1

What is this? Is it a flanking maneuver? What are the boxes, Roman legionnaires? US Corps in Desert Storm? Two platoons and a squad? Seems like the darker side has the advantage. Do they?

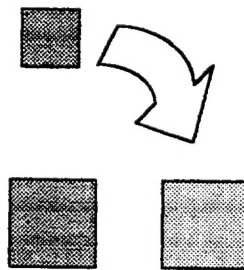


Figure 2

What is this? Is one side conducting an air attack? Orbital bombardment? Pouring boiling oil? It does seem that if commanders can position themselves and their enemy such that the enemy must respond to attack from multiple directions, that this will always be an intrinsic military advantage. But is it really? Are there things to be said about war that could help anyone win, from Sumerians to spacemen? Is it possible that there are things about war that produce favorable results no matter the time period or combatants in question?



For some time, military theorists have debated whether or not there are immutable principles, applicable across time, cultures, and the spectrum of conflict, that can serve as a guide to military action. This debate continues today.

The American military is sending conflicting signals as to whether it has resolved the issue as an institution. On the one hand, it has identified a list of such principles and have made a place for them in keystone doctrine. The military also uses them as an analytical tool in its desire to explain critical events in military history. On the other hand, the current team writing the Army's FM 100-5, Operations, has been asked to determine whether or not those principles should appear in the new edition. This is hardly a vote of confidence.

The fundamental problem is twofold. First, such a set of immutable principles must meet a seemingly impossible standard. They must apply to all times, all cultures, all wars, all types of military conflict. If there is such a set of principles that could serve as guides to victory for any commander, what would they be? Where would one discover them?

Second, many military thinkers do not want there to be any such principles. Throughout the history of military thought, many writers have refused to try to create immutable principles because of the fear that they would be called pedants. War is a difficult, mysterious thing. Its innermost secrets can only be discerned by great captains in the field on a case-by-case basis.

Still, if there were such a set of principles, it seems that after all this thinking about war someone would have uncovered some, if not all of them. I propose to start the investigation as to whether there are immutable principles useful in the search for victory right here at home.

Are the US Principles of War potential candidates for a guide to action for those seeking military victory across all cultures and time periods?

### Definitions

This is not a search for an analytical framework to help explain the past. This search is interested in finding, if any exist, ideas that, no matter the military situation, can assist any commander in planning and executing victory. This is not about how to fight, this is about how to win. These ideas cannot be tied to any one time, culture or technology.

Of all the available words to describe these ideas, principle is the only one defined in terms of being a guide to action. Theory, theorem, and axiom all assist in the scientific desire to explain and predict, but not guide. Law, rule, maxim and dogma all have pedantic connotations. Fundamental, imperative and tenet have all been used in various US doctrinal manuals for time- and technology-specific information.

Therefore, this study will use the term principle of victory (PV) to describe an idea that serves as a universal guide to achieving victory in military conflict. The use of the term principle of victory will also distinguish the results of this analysis from the eleven US principles of war which are the subjects of this analysis. The US principles of war are quoted below:

***Objective.*** Direct every military operation toward a clearly defined, decisive and attainable goal.

***Offensive.*** Seize, retain and exploit the initiative.

***Maneuver.*** Place the enemy in a position of disadvantage through the flexible application of combat power.

***Massed Effects.*** Mass the effects of combat power in a decisive manner in time and space.

***Economy of Force.*** Employ all combat power in the most effective way possible; allocate minimum essential combat power to secondary efforts.

***Simplicity.*** Prepare uncomplicated concepts and plans and direct, concise orders to ensure thorough understanding.

***Surprise.*** Achieve effects disproportionate to the effort by taking unexpected action.

***Unity of Effort.*** Achieve common purpose and direction through unity of command, coordination and cooperation.

***Exploitation.*** Take advantage of and make lasting the temporary effects of battlefield success.

***Security.*** Never permit the enemy to acquire unexpected advantage.

***Morale.*** Build, maintain and restore fighting spirit.<sup>1</sup>

Note that the US principles of war will always appear in bold italics. Note also that it is critical to understand the definition of the principle and not just what the one-word mnemonic seems to say. In the forward to Quest for Victory, GEN Frederick J. Kroesen says, “There are probably no two principles more respected and universally accepted than those of ‘the objective’ and ‘the offensive’ . . . it was stubborn adherence to these two principles that brought the carnage of World War I.”<sup>2</sup> Does he mean someone on the western front in The Great War had set decisive and attainable goals and seized, retained, and exploited the initiative and that these acts had resulted only in carnage? His words indicate a belief that the principles somehow mean conduct “offensives” against “objectives”. The military’s understanding of the US principles of war must be more mature.

Using the term principles of victory will obviate constant reference to “such principles” and the like. The fundamental question rephrased is: could the US principles of war serve as principles of victory?

#### Background and Context

The history of the development of the US principles of war is comprehensively studied in John Alger’s The Quest for Victory. In it the debate rages about their existence and the sources for the ones that exist today. This study suspends the debate temporarily and asks the reader to suppose it possible that there were such things as principles of victory. It is already known that Clausewitz and Jomini argued over them and that Sun Tzu gave his readers a lot of rules and then told them to break those rules as circumstances dictate.<sup>3</sup> This study is not about where the US principles of war come from, it is about their potential to serve as the basis for a lasting military theory.

FM 100-5, Operations (1993) states: “Fundamental to operating successfully across the full range of military operations is an understanding of the Army’s doctrinal foundations – the principles of war and the tenets of Army operations.” Further: “Today’s force projection Army recognizes the . . .

nine principles of war.” These principles “provide general guidance for the conduct of war.”<sup>24</sup> Additionally, the 1997 draft FM 100-5, Operations states “The 11 principles of operations are the foundation of Army doctrine. They instruct and inform our conduct of operations at all levels.”<sup>25</sup> The Army has decided, at least for now, that the US principles of war are fundamental to operating successfully and provide guidance. The questions this study will be asking are not about now, but the future. If the US principles of war are principles of victory, then they are universal. If they are universal, then they should apply to all military action everywhere, and across time.

If these principles are truly fundamental then why does not the Army just publish doctrine that describes how to use them in the current context? Why does the Army continue to revise them, add ‘tenets’ to them and ignore them in planning and execution? If they are fundamental, why has the Army only been enumerating them since 1921? Was *Mass* “bad” before then? What about other nations and cultures? Do they have any principles the US does not?

These are some hard questions that need answers.

### Significance and Importance

I have witnessed several hundred mock battles, as a commander, a staff officer and a trainer. As a trainer it was my job to judge the ‘military soundness’ of plans. I observed these plans and their execution in the most realistic combat training environment available. I often found them wanting, whether I helped develop them, tried to execute them or observed them as a trainer. Why?

It can be called “acetate anxiety”. It is the blank look planners get after they have digested an order from higher headquarters. They settle down with waterproof marker and an acetate covered map. They now intend to begin planning a military operation that will bring about decisive victory. Then it hits them that they have no idea where to start. Words like “offensive”, “objective” and “maneuver” pop into their heads. They have thoughts like “I know I should be trying to get on the enemy’s flank, but how?” Desperate for answers, they turn to “the book”, some doctrinal checklist for success, and begin to circle terrain features and plan unimaginative attrition battles.

Worse yet, those same doctrinal checklists are being reviewed more and more often as the pace of societal and technological change increases. When reviewed, doctrine authors are under pressure to devise new tenets, concepts and lists for war planners to incorporate into their operations. As the military renews these publications more and more often, the “fundamentals” will change more often. This is not a sound method for developing doctrinal changes to respond to ever-more-frequent changes in capabilities and threats.

Another question underlying this thesis is: how can there be new principles of warfare? If Airland Battle is now the old doctrine, will planners no longer seek versatility in their operations? Will there be no need for initiative? Of course the reaction is that the initiative is something always to be desired. It seems some fundamentals are more fundamental than others.

The authors of new concepts do not treat old doctrines very well. It is in the Army’s doctrine writing methodology to sell newly- or about-to-be approved doctrines with professional journal articles and senior leader briefings. These “sales pitches” often cast older methods in disparaging lights. The active defense is portrayed as attritionist and defeatist. Airland battle was linear and never able to cope with any threat but the old Soviet Union. However, in 1976 the best and brightest the Army had to offer slaved to carefully craft its underpinning doctrinal concepts. How is it that their answer can be the target of so much derision today? Does the Army speak any more highly of pentomic divisions? Its performance in Korea? Is the only good doctrine the one just written?

At no other time in its history would an enduring military theory so benefit the Army. For the first time, the pace of change is so great that the Army is developing a future doctrine (Force XXI) while simultaneously talking about its successor (Army After Next). Principles of victory, if they existed and theorists had discovered all or most of them, would allow the Army to make doctrinal changes at the margins and obviate the need for complete rewrites and retraining in the underpinnings of victory. Also, since by definition principles of victory are universal, they would apply equally to joint and combined operations and across the entire spectrum of conflict. This would make doctrinal development and military instruction in all operations much more cohesive and simpler.

If they exist, but military theory has not discovered them, the Army might begin a more thorough search. If they do not exist at all, nothing about current doctrinal development methods need change and nothing would be lost.

#### Assumptions

Obviously, this study assumes that it is at least possible that such a thing as principles of victory exist. It is exploring the potential of the US principles of war to serve as such.

#### Limitations

A limitation of the study is that in order to test the universality of the US principles of war, the current doctrinal underpinnings of other nations must be included. This required English translations of somewhat restricted documents. Fortunately, I had the assistance of the ninety international officers of the 1997 Command and General Staff Officer's Course (CGSOC).

What was not fully available were any articles published by other nations in military journals that have not been translated. While there is access to many such articles, there may have been something said in another country about the subject that the author was not able to find or use.

Another limitation is that not every nation even has a central doctrinal document, let alone one with stated military principles.

#### Delimitations

This study does not examine every other nation's doctrine, rather as many as possible that represent a useful cross section of cultural types. It will not be touching on the development of the US principles of war because Mr. Alger has done that exhaustively.

As far as the views of military theorists are concerned, this paper examined those views as statements of military theory that are representative of their times. It did not conduct a survey of their positions in the great debate over whether there are, or should be, military fundamentals.

### Problems and Solutions

The chief challenge was that the scope of the study might grow too large. Each of eleven separate concepts had to be tested against other nation's similar concepts and those of history. The solution was to refine the theorists and cultures used in the examination as seen in chapter 2. The original plan was to look at the principles against the spectrum of conflict as well, but the current definition of operations that are not war is so muddled, it seemed best to stick to an examination of what might be fundamental about war without looking at what might be fundamental about those things that are short of war but share some of its characteristics or players.

### Conclusion

This thesis will expose the US Army principles of war to some very harsh light and thorough cleaning. If they stand up, they will be given back to the Army with the polite request to treat them more "fundamentally." If they seem in need of addition, deletion or revision, that will be recommended.

---

<sup>1</sup> US Army, FM 100-5, Operations (Coordinating Draft) (Ft. Leavenworth, KS: Combined Arms Command, 1997), II-2-1.

<sup>2</sup> John I. Alger, The Quest for Victory: The History of the Principles of War (Westport, CT: Greenwood Press, 1982), x.

<sup>3</sup> Carl von Clausewitz, Principles of War, trans. Hans W. Gatzke in Roots of Strategy, Book 2 (Harrisburg, PA: Stackpole Books, 1987), 184; Antoine Henri Jomini, Art of War, ed. BG J. D. Hittle, USMC (ret) in Roots of Strategy, Book 2 (Harrisburg, PA, 1987), 461; Sun Tzu, The Art of War, ed. James Clavell (New York: Delacorte Press, 1983), 11.

<sup>4</sup> US Army, FM 100-5, Operations (Washington, DC: Department of the Army, 1993), 2-4.

<sup>5</sup> US Army, FM 100-5, Operations (Coordinating Draft) (Ft. Leavenworth, KS: Combined Arms Command, 1997), II-2-1.

## CHAPTER 2

### RESEARCH DESIGN

The research for this thesis uncovered many trends. First, the military is undecided about the place of principles of war. In some cases they are cited, analyzed, and etymologized as though immutable and useful. In some cases they are derided and shoved aside. Too, the Army is questioning their basic structure and validity as part of the development of the new FM 100-5.

Second, there is a major debate throughout history up to the present day as to whether there are immutable principles or not. There are some who believe that good generals make victory out of the circumstances given them and that warfare's fabric changes from time to time and across cultures. This group sees doctrine as tied directly to the time of its writing, without utility before or after that point. Others feel that the principles of war represent fundamental pillars of military operations that have always been and always will be. This group believes doctrine is like a translator, turning the principles of war into the language of the day.

Finally, there is also an underlying distrust of theorists. They are called "scholars" and relegated to secondary consideration because they have not "been there." The solutions of theorists are seen as lacking practicable application.

This thesis relied most heavily on an examination of the fundamentals of military theory in many other nations of the world. It searched for available non-Western works to be sure the examination maintained a universal perspective. This theoretical body includes other nations' stated principles of war or doctrinal equivalent.

The research also relied heavily on John Alger's Quest for Victory. This book is an examination of the history of the principles of war, their origins, and development. Quest does not render judgment



on them, rather objectively showing the reader how the military ended up with the ones it has and leaving him to his own devices. It is also useful as a survey of the key works in military theory that are well summarized in multiple appendices.

Another group of included works are the writings of Army officers, such as Robert Leonhard and Ralph Peters, who are taking a critical look at the way the Army creates and uses its doctrine. A particular example is Leonhard's Art of Maneuver, which argues strongly that Army doctrine, no matter how well dressed or intentioned, continues to show a predilection for wasteful attrition combat and that it fails to incorporate more fundamental but intellectually challenging methods. This group includes some recent Master of Military Arts and Sciences (MMAS) theses, School of Advanced Military Studies (SAMS) monographs and military journal articles.

Another category of material in the research are works of pure theory. This body of sources examines the methods of war in an organized framework with a philosophical viewpoint. Rather than a discussion of particular battles or doctrines these works attempt to see patterns and structures. Examples of significant works in this area are: Azar Gat's Origins of Military Thought, Julian Lider's Military Theory, and Bevin Alexander's How Great Generals Win, as well as those by accepted, classical theorists.

This study examined the key doctrinal manuals in use in the Army for various periods. This examination primarily focused on FM 100-5, Operations, or its equivalent and looked at the manner in which the Army incorporates the principles of war into its doctrine and the other tenets or fundamentals included.

The research included military journals such as Military Review, Marine Corps Gazette, and Russia's Military Thought for articles examining anyone's principles of war. This was the most disappointing aspect of the research. While the period from 1945-1965 was rich with theoretical discourse, after that period the articles are primarily salesmanship looking to foster the author's personal agenda with respect to some weapon system or doctrine.

There were two fundamental findings of this research. First, there is no current interest in this topic. Virtually all recent material is discussion in support of or opposing the acceptance of some

proposed doctrine and not a debate on what is unchanging about war. Second, while there have been comparisons of various military theories in the past, they usually amount to no more than a simple matching of lists of principles or tenets and not an in-depth examination of who is saying what about war.

In the examination as to whether the US principles of war might be candidates for an enduring military theory, the following methodology was used:

Step One: Clearly state the principle of war currently under examination and break its definition down into component parts. At this point if there is some aspect of the definition that requires further explanation or discussion, it will follow.

Step Two: Examine the principle in relation to how it has developed over time. The examination is looking to see if the principle has appeared throughout history or is a relatively recent phenomenon. The following theorists are the basis for this portion of the examination: Sun Tzu, Vegetius, Henri, Duke of Rohan, Carl von Clausewitz, and J.F.C. Fuller. They were selected from among all others for several reasons. First, their work spans the period 500 B.C. to the early twentieth century. If there is a commonality to any portion of their work, the presumption can be made that the concept in question is timeless.

Second, they stated in their work what they felt to be the fundamental aspects of achieving victory. Each of these theorists enumerates guides to action that are recommended for their ability to produce or support success in war.

Third, they are each individually noteworthy. Sun Tzu was a general and military adviser during China's Warring States period. He is believed to have lived between the years 500-300 B.C. His work, The Art of War, is today the starting point for any course on military theory and is the first known treatise on the subject.

Flavius Vegetius Renatus wrote De Re Militari (normally translated as Military Institutions of the Romans) in the fourth century A.D. as advice to the emperor Valentinian II. In it, Vegetius recommends a return to the excellence of the Roman military system of the late republic and early empire as a solution to the declining standard of military performance of his time. It contains a section titled "General

Maxims” that lists a number of basic principles of war. De Re Militari, commonly understood to be the most popular military work of the Dark and Middle Ages, is known to have been quoted or owned by such notables as Charlemagne, the Duke of Anjou, Henry II of England and his son Richard the Lionheart, Montecucoli and the Austrian Field Marshal, Prince de Ligne. Machiavelli quotes the General Maxims verbatim in his Art of War.

Henri, the duke of Rohan, a French Huguenot commander in the 1600’s, wrote Le Parfait capitaine (The Perfect Captain) in which he lists his “guides”: seven principles of war. These guides are the only such enumerated list between Vegetius and the 18th century.

Carl von Clausewitz was an officer during the Napoleonic wars and a key part of the Prussian reform movement following the disasters of 1806. His works On War and The Principles of War are the bedrock of modern Western and Russian military theory.

J. F. C. Fuller, a British officer and military theorist of the early twentieth century, was the first to seek incorporation of an enumerated list of principles into his army’s formal, written doctrine. His writings, in particular The Foundations of the Science of War, provided the basis for both the modern British and American principles of war.

These characteristics serve to make these five theorists necessary and sufficient for a determination of the potential timelessness of the US principles of war.

Step Three: Compare the principle and the key components of its definition to the principles enumerated by other countries (if they have such a set of principles). Although the research includes information from most of the countries in the world, Britain, France, Russia, China, and Portugal will best serve the examination. This group is necessary and sufficient because:

1. It represents the world’s largest and most professional armies.
2. It represents the members of the UN Security Council and the major players on the world stage.
3. It has members of both eastern and western cultures.

4. It covers countries on every continent, when the 'colonial factor' is considered.

It is notable who is not included in this list. It does not include any former colony or protectorate whose military theory is not substantially different from its old masters. This, of course, eliminates a shocking number of modern states, including India, Israel, the British Commonwealth, most of South and Central America, and all of Africa.

Steps one through three will comprise chapter 3, Analysis.

Step Four: If a principle appears in the majority of both groups, temporal and cultural, it will be recommended as a candidate for a guide to action in an enduring military theory. There will be, admittedly, some subjectivity as to whether a stated US principle of war is the same as a similar concept in another time or culture that is not named the same way or is not worded in a substantially similar way. This subjectivity will be reduced by stating in my analysis what characteristics of the principle were found to match or not match the equivalent historical or cultural concept.

Step Five: If it is discovered that some, but not all, components of a principle may be enduring, the study will recommend a restatement combination of concepts that will make it match a majority of similar historical and cross-cultural principles and therefore "pass the test" in its new form.

Steps four and five will comprise chapter 4, Conclusions.

## CHAPTER 3

### ANALYSIS

This analysis is divided into eleven sections, each corresponding to the eleven US principles of war (which may become principles of operations, but amount to the same thing) described in the 1997 draft of FM 100-5. Within each section, that principle is compared to any similar principles existing in other key cultures and eras.

#### Objective

“Direct every military operation toward a clearly defined, decisive and attainable goal.”<sup>1</sup>

There are three key concepts of the principle of the **Objective**. First, one make the goal of the operation one that can be understood throughout the command. Second, it is a goal that matters in the overall scheme. Finally, it must be one that is within the projected capabilities of the command.

#### The Principle of The Objective in Previous Centuries

##### Sun Tzu

Sun Tzu does not have much to say directly on the subject of the objective. This may be because he felt it unnecessary to remind the sovereign that there should be a reason for his military action. He does say two fundamental things about the “why” of war: “In war, then, let your great object be victory, not lengthy campaigns.”<sup>2</sup> Here, Sun Tzu wants the sovereign to focus, not on the act of campaigning, but on final victory. This is also a major goal of the statement of the **Objective**.

He also states that “To fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy’s resistance without fighting. In the practical art of war, the best

thing of all is to take the enemy's country whole and intact; to shatter and destroy it is not so good.”<sup>3</sup> In this statement, he again emphasizes that the commander should not fight battles for battles sake, but should seek the overall goal in the most efficient manner possible. While these are not explicit statements of the principle, they produce the same effect: a guide to action recommending that the overall goal of the operation be kept in mind and all activities directed toward it.

### Vegetius

Like Sun Tzu, Vegetius does not recommend any explicit guide to action that references the overall objective of the war or campaign.

His work does contain a section entitled “Motives for the Plan of Operations of a Campaign”. In it, also like Sun Tzu, he emphasizes the need to avoid engaging the enemy for no purpose other than to fight. But this section is about under what conditions one should engage the enemy army and not about the goal of the campaign.

It is interesting to speculate whether this is because ancient armies consisted of one main field army and the garrisons it left along its lines of communications (LOCs) and that this army's purpose was always to defeat the enemy's main army. Ancient writers may have thought it so obvious that the commander would know and communicate the decisive goal that it did not need mentioning.

### Henri, Duke of Rohan

Henri's “Guides”<sup>4</sup> do not address the concept of the *Objective*. It can be surmised he felt it obvious.

### Clausewitz

Clausewitz tells us: “Warfare has three main objects: (a) To conquer and destroy the armed power of the enemy; (b) To take possession of his material and other sources of strength, and (c) To gain public opinion.”<sup>5</sup>

Clausewitz' statements about the objectives of war departs from the older theorists in that the objects beyond the destruction of the enemy's army are explicitly stated. His tactical principles focus on action at the decisive point or points in the campaign and recommending directing "the preponderance of physical forces"<sup>36</sup> against those points but not all activity in a manner clearly understood throughout the command.

Interestingly, he does have something to say about the *Objective* in his narrative of defensive tactical principles: "Pursue one great decisive aim with force and determination."<sup>37</sup> What is interesting about this statement is that it is buried in a discussion of defensive meeting engagements and appears nowhere else in the work. At the same time it has much the same characteristics as the US principle.

#### J.F.C. Fuller

"In his plan, [the general] should aim at establishing such a condition that policy can take effect."<sup>38</sup> Fuller, ever Clausewitzian, focuses on objectives at both the strategic and tactical levels. At the strategic level, the military leader is creating the conditions necessary for the political leader to put his policy into motion. At the tactical level, the soldier is battling the enemy on one or more lines of direction that support creating those favorable political condition. Presumably he would interpret the 'every military operation' portion of the definition of *Objective* by separating out what is going on tactically vice what is going on strategically, but see both his discussion and the principle guiding the commander to the same end: line up your plan on what is decisive.

## The Principle of The Objective and Other Cultures

### The United Kingdom

“Selection and Maintenance of the Aim: In the conduct of war, and therefore in all military activity, it is essential to select and define the aims clearly. Once decided the aim must be circulated as widely as security allows so that all can direct their efforts to achieve the aim.”<sup>9</sup>

The British agree that the objective (aim) should be clearly defined, that it should be understood throughout the command and that all efforts should be directed toward that objective. The background text to the principle statement also indicates that the goal should be attainable. They do not explicitly state that it should be decisive.

### France

The Instruction Generale does not list a separate principle of the ***Objective***. It addresses the concept differently in two different areas. First, it lists the clearly defined objective as a condition under which the principles of war must exist to be employed effectively. Second, looking again at their definition of ***Mass***: “Concentration of all different actions and effects of weapon systems toward a single goal, at the right place and time.”<sup>10</sup>, the idea of the single goal is incorporated into the ***Mass*** concept. Taken together, these two statements address the clear and singular nature of our principle, but do not discuss the necessity for an attainable goal or its decisiveness. If the idea of “right place and time” in their concept of ***Mass*** means the goal is assumed to be a decisive one, then their belief in the concept is substantially similar to the US principle without being stated separately.

### Russia

“Decisive concentration of the essential force at the needed moment and in the most important directions and for the decision of the main mission.”<sup>11</sup>

The Russians, like the French, link the concept of the ***Objective*** to that of ***Mass***, making the point of massing the attaining of the overall goal.



## China

“Principle of Aims: The chief aim of warfare is to annihilate the enemy, not to attempt to capture or hold a city or region.”<sup>12</sup>

The Chinese principle is meant more as a statement of philosophy than a guide to action for commanders. The Chinese principles do not contain an equivalent to the idea of focusing activity on a single, decisive goal other than destruction of the enemy. There is no discussion of the need for subordinate goals or for them to be clear, attainable and decisive.

## Portugal

“Perseverance: It is essential to persevere firmly in reaching the principal aim.”<sup>13</sup> This principle, unique in my study, does not address choosing a decisive aim or ensuring it is understood throughout the command. It can be interpreted that the “principal” aim is the decisive one and that one of the obstacles causing the need to persevere in reaching it is the challenge of having it understood. The case can also be made that persevering firmly in reaching an aim is the equivalent of directing every military operation toward one.

## Offensive

“Seize, retain and exploit the initiative.”<sup>14</sup>

Note that this principle is really about initiative, not offensive action or attacks. It is, of course, possible to be defending and exploit the initiative.

## The Principle of The Offensive in Previous Centuries

## Sun Tzu

“Security against defeat implies defensive tactics; ability to defeat the enemy means taking the offensive.”<sup>15</sup> “Therefore the clever combatant imposes his will on the enemy, but does not allow the enemy’s will to be imposed on him.”<sup>16</sup> Throughout The Art of War, Sun Tzu emphasizes the need to retain the initiative, force the enemy to react to friendly action and to dominate the battle of wills.

### Vegetius

While Vegetius does not focus on the concepts of offensive or initiative, per se, he does talk a great deal about influencing and not being influenced by, the enemy: “Novelty and surprise throw an enemy into consternation; but common incidents have no effect.” “Those designs are best which the enemy are entirely ignorant of until the moment of execution.” “On finding the enemy has notice of your designs, you must immediately alter your plan of operations.” “Dispositions for action must be carefully concealed from the enemy, lest they should counteract them and defeat your plans by proper expedients.”<sup>17</sup>

While these statements are, on the surface, about the impact of poor security and the enemy achieving surprise, it is important to remember that *Offensive* is not about attacking or offensive action, it is about getting and keeping the initiative. Vegetius is saying that losing the initiative is often the result of reacting to enemy action, which in turn is often caused by being surprised by the enemy or his discerning our plan. While this does not make *Security* and *Surprise* subordinate to the concept of initiative rather than separate principles, it does give some depth to their importance.

### Henri, Duke of Rohan

Henri's list of principles includes “Never allow yourself to be forced to combat against your will.”<sup>18</sup>

Henri doesn't phrase the concept in the positive manner, but it is clear he felt it important to be the actor with the free will in combat.

### Clausewitz

Clausewitz states that “. . . it is the nature of war to advise the most decisive, that is, the most audacious . . . never forget that no military leader has ever become great without audacity.”<sup>19</sup>

While not said in terms of initiative or the imposition of will, Clausewitz felt strongly about the need to act offensively. He was highly critical of defensive operations as not being able to provide decision at the critical point in the theater.

He also says that “It is only with troops left at our disposal that we can turn the tide of battle.”<sup>20</sup>

Like others of his time, Clausewitz focused heavily on the need for a strong reserve. Many battles of his era had been won by the last general to commit his reserve and this was often equated to maintenance of the initiative.

#### J.F.C. Fuller

Fuller makes the following comment about initiative: “The aim of the principle of offensive action is, therefore, to compel the enemy to accept our will with the least expenditure of force.”<sup>21</sup>

Fuller is at his best in this discussion. He is very unforgiving of the generation of “offensivists” who gave his country WWI’s bloodiest battles. He is very clear that the point of offensive action is the initiative and keeping it, not simply attacking. Due to his era, he attaches the additional qualifier that we must not only impose our will, but do it with the minimum cost.

## The Principle of The Offensive and Other Cultures

### The United Kingdom

“Offensive Action: Offensive action is the chief means open to a commander to influence the outcome of a campaign or a battle. It confers the initiative on the attacker, giving him the freedom of action necessary to secure a decision. . . . Offensive action embodies a state of mind which breeds the determination to gain and hold the initiative.”<sup>22</sup>

The British principle recommends both the gaining and maintaining of the initiative, but not specifically the exploitation of it. Instead, it makes the object of getting and keeping the initiative “the freedom of action necessary to secure a decision”, which is essentially the point of the exploitation of the initiative.

### France

“Freedom of Action: To be able to act in spite of the enemy and limitations imposed by the environment and circumstances.”<sup>23</sup>

Unlike ourselves and the British, the French emphasize this principle over the *Objective*. It is the focus of the work on fundamentals by Marshall Foch and the lead concept in their doctrine. They include a discussion of the offensive as a component of achieving mass and not as the means to get and hold the initiative, which is for them the point behind the idea of freedom of action. It is an attitude of “This is what I can do” as opposed to “This is what I must do because the enemy makes me”.

### Russia

“Surprise, decisiveness, aggressiveness of military activity, continuous striving to achieve and retain the initiative.”<sup>24</sup> The Russians address the desire to get and hold the initiative, but do not clarify the point of doing so. Once again, this may be because certain things are assumed by the author of the Russian principles.

## China

“Principle of the Offensive: The primary aim of the army is to attack, not to retreat. Thus even in the midst of retreat, the posture of offense is assumed.”<sup>25</sup>

Some of the early theoreticians stated this concept the same way: in terms of being able to resume the offense from the defense as soon as possible. This requires the reader to equate attacking with having the initiative, but this is typically seen as an acceptable leap.

## Portugal

The Portuguese principles do not include a separate principle of *Offensive*. The concept of being free to act without restriction by the enemy is included in their principle of *Security*.

## Maneuver

“Place the enemy in a position of disadvantage through the flexible application of combat power.”<sup>26</sup>

Since maneuver is also a component of combat power, this definition is recursive. This presents some difficulty. Are there two ‘flavors’ of maneuver? As a component of combat power, maneuver is defined as “shifting combat power – forces and effects – to gain advantage.”<sup>27</sup> The principle *Maneuver* would seem to indicate that movement of combat forces is only one way to place the enemy in a position of disadvantage; that it can also be done with flexible application of firepower, protection and leadership.

For the purposes of this study, then, there will be two types of maneuver. The first is the “lower order” movement of forces and the second, “higher order” *Maneuver*, is the application of all components of combat power.

## The Principle of Maneuver in Previous Centuries

### Sun Tzu

Sun Tzu's commentary related to the movement of forces and the application of combat power begin a trend that exists throughout the writings of the pre-twentieth century military thinkers. His focus is on the disposition of forces at the start of battle and not in significant maneuver throughout the area of operations. This is, of course, because until the battle of Leipzig in 1813, battles were fought in areas about two to six miles square and usually lasted less than a day. Command and control limitations meant generals had little control over events after the initial clash except to commit reserves already present on the battlefield. How the opponents looked after the first engagement often determined the course of the entire battle.

He does have some things to say about creating relative advantage, however: "Attack him where he is unprepared, appear where you are not expected."<sup>28</sup> "That general is skillful in attack whose opponent does not know what to defend."<sup>29</sup> These statements emphasize the need to place combat power where you have the advantage and are thus similar to *Maneuver*. They do not address the use of firepower, leadership or protection per se, nor do they discuss flexibility.

### Vegetius

Like Sun Tzu, Vegetius places his emphasis on battlefield disposition at the start of battle. He recommends six formations, the choice of which depends on the commander's estimate of the relative combat power of the two forces. Each formation is designed to create the best possible local advantage over some portion of the enemy line.<sup>30</sup>

### Henri, Duke of Rohan

"Choose a field of battle according to the number of your troops, their quality and the type of engagement you wish to make. Arrange your army in battle in a manner that enables you to renew the

fighting several times with ordered troops. Place the different lines in such a manner that they can sustain each other.”<sup>31</sup>

Henri continues the trend. Look at the verbs in these statements: choose, arrange, place. These are verbs of disposition, not maneuver. Still in the seventeenth century, initial set means more than battlefield machination.

### Clausewitz

“We should direct our main thrust against an enemy wing by attacking it from the front and from the flank, or by turning it completely and attacking it from the rear. Our main force should try to attack the [enemy] wing concentrically, so his troops find themselves assailed from all sides.”<sup>32</sup>

Although writing in the nineteenth century, Clausewitz is also much concerned about the initial array of forces. He does spend a great deal of time talking about reserves and corps arranged in depth. This is still a single battlefield focus, however, and not an emphasis on campaign maneuver or the use of all components of combat power.

### J.F.C. Fuller

“Mobility is the . . . principle which endows all military operations with activity, whether offensive, protective, or logistical, and it finds its expression through the element of movement which draws its power from physical energy. Mobility is the principle which governs the expenditure of force.”<sup>33</sup> The discussion on mobility links the need to concentrate and the need to impose will with the fact that either is near impossible without the ability to move freely. In this sense, it is more like the French idea of freedom of action than putting the enemy in a position of disadvantage. To Fuller, mobility is an enabler of other principles rather than an end unto itself. If “position of disadvantage” is defined as both without the initiative and with an inferiority of combat power at the decisive point, then Fuller and the US principle begin to look more alike.

## The Principle of Maneuver and Other Cultures

### United Kingdom

There is no equivalent to *Maneuver* in British doctrine. They do have a principle of Flexibility that discusses keeping a reserve and being able to adapt plans to changing situations, but not a concept of creating advantage through movement or application of combat power separate from *Mass*.

### France

There is no separate French principle of *Maneuver*. They believe that a maximization of operational and tactical mobility is an implied task in the achievement of freedom of action, one of their principles of war.<sup>34</sup>

### Russia

“The simultaneous destruction of the enemy to the entire depth of his deployment, the timely accumulation of forces, the clever maneuver of forces and means for the development of military action at a rapid tempo, and the destruction of the enemy in a short period.<sup>35</sup>” Although focusing on destruction instead of merely gaining advantage, the Russian principle intends to maneuver both forces and means. This is similar to the US desire to apply all of the components of combat power, not just forces.

### China

“Principle of Mobile Concentration: The most effective type of warfare is that in which the forces are invincibly superior to the enemy’s, so that a relatively small group may concentrate its power against the weakest part of the enemy’s defense. In order to seize every opportunity that might present itself, the forces must remain entirely mobile and be able to shift to whatever area may be attacked profitably.”<sup>36</sup>



This is the same principle we looked at under *Mass*. This is another example of these two principles being linked by the author's desire to recommend concentration as well as a method for achieving it.

#### Portugal

There is no Portuguese principle of *Maneuver*. They do have a principle called "Impulsion" which states: "Impulsion produces the greatest speed and therefore the greatest moral and physical effects."<sup>37</sup>

#### Massed Effects

For purposes of illustration, the discussion of "massed effects" (or, for our purposes, Mass) begins with the "old" definition: "Mass the effects of overwhelming combat power at the decisive place and time"<sup>38</sup>

Every word in the definition of mass that is not an article or conjunction has powerful meaning and is critical to the understanding of the principle. Before continuing then, these component parts must be discussed in a little more detail to better facilitate later examination and comparison.

Mass used as a verb (as in "to gather or form into a mass") implies that whatever is being formed into a mass is not currently so formed. The Army does not see combat power as something which stays massed. In US doctrine, combat power "is created by combining the elements of maneuver, firepower, protection and leadership."<sup>39</sup> The normal state for these components is to be dispersed in time and space and to get what commanders want out of them, they must be massed. The use of the qualifier effects denotes that combat power itself need not be "massed", just its effects. Combat power must then have different qualities than its effects if the distinction is important. This also implies that combat power and the effects of combat power can be distinguished from each other.

It is not just combat power that must be massed, it is overwhelming combat power. This implies that a relative significant superiority must be established. This further implies that commanders can, by calculation or intuition, determine if they have overwhelmed the opponent in relative combat power.

Unfortunately, the Army has defined overwhelming combat power as “the ability to focus sufficient force to ensure success and deny the enemy any chance of escape or effective retaliation”<sup>40</sup> which uses the word sufficient to describe something that is supposed to be overwhelming and which focuses force, not combat power or its effects.

All of this must occur at the “decisive place”. This implies that **Mass** cannot just be applied anywhere, but at some determinable location considered decisive. Additionally, mass must be applied at the “decisive time”. This implies a fourth dimensionality where just being at the decisive place would not be enough.

The new draft of FM 100-5, Operations gives us: “The Principle of Massed Effects: Mass the effects of combat power in a decisive manner in time and space.”<sup>41</sup>

The new, but as yet unapproved, definition of **Mass** is an interesting, if insubstantial, change. Overwhelming is gone, replaced by decisive manner, which combines the decisiveness of the location and time with the need to have lots more than the enemy. The key change in the expanded definition is that we must mass in time to “overload” the enemy’s morale and systems and in space at the “right combination” of physical points to “shatter the coherence” of his operations. While possibly helpful in clarification, the changes are cosmetic and the principle remains unchanged.

### The Principle of Mass in Previous Centuries

#### Sun Tzu

In the style of the time, Sun Tzu did not list the fundamental underlying principles in a compact, concise manner. Rather, his narrative reads now as it was originally used: advice whispered in the sovereign’s ear designed to make him victorious in war. The reader can, however, deduce certain principles from the combination of the many things said throughout the work.

In the case of **Mass**, Sun offers no direct advice and, in fact, **Mass** is probably the least important of his recommended techniques. His eastern outlook, unfettered by the western-feudal need for decision and glory in combat, de-emphasized the actual clash of forces in favor of victory through

stratagem, deception and maneuver. Still, even he admits that victory often requires battle and speaks throughout The Art of War about the relative combat power of the adversaries.

Among his “Seven Considerations”, we find: “Which army is the stronger? With whom lie the advantages of Heaven (environment) and Earth (terrain)? On which side are men and officers more highly trained?”<sup>42</sup>

If “stronger army” means more overall combat power, “advantages of Heaven and Earth” means using the terrain and environment to multiply combat power and training of the officers and men can be equated to an advantage in the leadership component of combat power, then three of the seven considerations for victory discuss the need for combat power advantage.

Among his “Five Essentials for Victory”: “He will win who knows when to fight and when not to fight. He will win who knows how to handle both superior and inferior forces.”<sup>43</sup>

From the Chapter on “Tactics”: “The skillful fighter puts himself in a position that makes defeat impossible and does not miss the moment for defeating the enemy.”<sup>44</sup>

Here the requirement to make defeat impossible is very reminiscent of the US definition of overwhelming combat power where the enemy is denied any chance of escape or effective retaliation.

From the Chapter on “Weak Points and Strong”: “You can be sure of succeeding in your attacks if you only attack places that are undefended. You may advance and be absolutely irresistible if you make for the enemy’s weak points.”<sup>45</sup>

The emphasis on weak points is a simplified discussion of relative combat power. The enemy is not really weak where he is not threatened at all, but rather where he can be overmatched without significant risk elsewhere and when.

Even in 500 B.C. there is a need to gather force at a key place and time to produce an overmatch in combat power. It is not, however, as strong a statement of the concept as in the US principle.

### Vegetius

While Vegetius' work focused on specific recommendations to a late Roman emperor on returning his forces to the prime fighting ability of his ancestors, careful reading can determine the underlying theme of his recommendations.

Vegetius is very specific in his recommendations concerning the disposition of forces prior to a general engagement. The recommendations are based on a comparison of relative combat power and how best to attain local superiority through battle formations. An attack on both wings of the enemy line, for example, is highly desirable, but requires a high level of training and discipline. Without this, he recommends a less effective, but less risky method of strengthening one wing and attacking obliquely. In all of his recommendations concerning battle formation, not only is a local superiority desired, but it requires an understanding of time and space. The oblique formation must strike the weak portion of the enemy's line. The attack by the wings must occur before the enemy can penetrate the friendly center.<sup>46</sup> While no explicit statement is made that we would recognize as a coherent principle, we find guides to action based on the idea of selecting a key point and time and placing a superiority of combat power there.

### Henri, Duke of Rohan

Three of Henri's principles apply to *Mass*. "Choose a field of battle according to the number of your troops, their quality, and the type of engagement you wish to undertake. Put the best troops on the wings and attack with the wing that is the strongest. Have good leaders at the head of each principal corps."<sup>47</sup>

While Rohan's guides do not include an explicit statement on *Mass*, many of the characteristics of the principle can be found in these statements. In the first, he seeks an advantageous terrain position and takes into account numerical strength, troop quality and battlefield framework. In the second, he recommends acting with a superiority in strength. Finally, he recommends focusing leadership (as a component of combat power) in the main effort units.

### Clausewitz

“The theory of warfare tries to discover how we may gain a preponderance of physical forces and material advantages at the decisive point.”<sup>48</sup>

This statement, listed first under the title “Principles for War in General”, does, once again, declare the desire to have significant advantage over the enemy at some point in time and space considered important to the overall effort. It does not discuss the role of the nonmaterial components of combat power, and it is the translation of decisive point that gives credit to Clausewitz for meaning both in space and time. He did believe advantage at the decisive point to be critical at both the tactical and strategic levels of war and focused on it as the principal means of causing the defeat of the enemy army.

### J.F.C. Fuller

“Once our object has been decided on and the direction toward our objective fixed, the next question is to concentrate force against this objective – that is, to seek a decision.”<sup>49</sup>

Fuller’s examination of the principle of concentration focuses on attaining superiority of force at the point best able to produce a decision that will result in the attainment of the overall objective. He notes that the enemy will often not cooperate with this intent and describes methods (maneuver, surprise, etc.) whereby this concentration may be achieved even without an overall superiority in numbers. While the discussion becomes a little too physical when Lancaster equations are applied to military actions, the elements of the US principle are there: correct location in time and space of a superiority in combat power.

## The Principle of Mass and Other Cultures

### The United Kingdom

“Concentration of Force: Military success will normally result from the concentration of superior force at the decisive time and place. This does not preclude dispersion which may be valuable for the purposes of deception and avoiding discovery and attack. Rapid concentration and dispersion

depend on good communications and an efficient traffic control system. They also depend on balance, the essence of the next two principles [Economy of Effort, Security].<sup>50</sup>

While substantially similar, the UK principle contains some interesting differences. First, the principle is presented definitively as a guide to military success. This is a more declarative relationship than is found in the US principles.

Second, only superior force is required, not overwhelming or maximum. While probably semantical, the implication is that simply better is enough.

Third, there is the discussion of concentration vice dispersion, implying that the force being discussed is something that should routinely be dispersed, like ground combat forces, as opposed to a combination of the effects of divergent subcomponents of combat power, particularly the less tangible ones (i.e. you can't disperse "leadership").

Finally, the principle is specifically linked to two other principles, *Economy of Force* and *Security*. The implication here is that to implement concentrate force, as a guide to action, one must protect it (*Security*) and go without somewhere else (*Economy of Force*). The linkage to *Economy of Force* is particularly interesting because of the relationship many cultures, including America's, ascribe between *Economy of Force* and *Mass*. This discussion will appear again in the analysis of *Economy of Force*.

#### France

"Mass: Concentration of all different actions and effects of weapon systems toward a single goal, at the right place and time."<sup>51</sup>

The French version contains the familiar elements of concentration and "right" place and time. It also contains the more specific definition of what to concentrate as actions and effects of weapon systems in place of the more generic combat power or force. This implies that the only effects to concentrate are those of weapon systems. If effects of non-weapon systems or other components of combat power are needed, presumably they fall into the actions category.

The real difference between this and other statements of the principle of *Mass* is the focus on a single goal. Rather than have a separate principle that defines the need to focus on an objective or mission accomplishment, the French incorporate that concept into their definition of *Mass*.

#### Russia

“Decisive concentration of the essential force at the needed moment and in the most important directions and for the decision of the main mission.”<sup>52</sup>

All of the familiar elements are here. In addition, like the French, the Russian principle links *Mass* to the mission or goal.

#### China

“Principle of Mobile Concentration: The most effective type of warfare is that in which the forces are invincibly superior to the enemy’s, so that a relatively small group may concentrate its power against the weakest part of the enemy’s defense. In order to seize every opportunity that might present itself, the forces must remain entirely mobile and be able to shift to whatever area may be attacked profitably.”<sup>53</sup>

The Chinese principle is really a combination of the principles of mass and maneuver. If “weakest part of the enemy’s defense” is the decisive place, all that is missing is a statement about the decisive time. This statement of the concept is more tied to the traditional definition of combat power and does not address an attacking enemy, but does address the concept of dispersion being the normal state of affairs requiring action to bring about the superiority in combat power.

#### Portugal

“Concentration: It is essential to concentrate the maximum force at the right place and at the right time.”<sup>54</sup>

Like the British principle, the Portuguese explicitly qualify theirs as a guide to action by stating what to do and that it is essential. Otherwise, all of the key elements (concentrate, maximum, force, right place, right time) are there.

### Economy of Force

“Employ all combat power available in the most effective way possible;  
allocate minimum essential combat power to secondary efforts.”<sup>55</sup>

This statement requires a common understanding of what is meant by combat power, that a most effective means of employment can be agreed upon and that one decides correctly how much combat power is minimally essential.

### The Principle of The Economy of Force in Previous Centuries

#### Sun Tzu

Sun Tzu is very explicit about the need to attack the enemy's weakness as we have seen in the discussion on **Mass** and discusses the way in which that mass is created in several different places in The Art of War: “The spot where we intend to fight must not be made known, for then the enemy will have to prepare against a possible attack at several points; and his forces being thus distributed in many directions, the numbers we shall have to face at any given point will be proportionately few.”<sup>56</sup> “Knowing the time and place of the coming battle, we may concentrate from the greatest distances in order to fight.”<sup>57</sup> The interesting pattern in his discussions of the way in which to achieve mass is that they are always tied to either use of deception or initiative. He does not explicitly state **Economy of Force** as a concept, but throughout each section on attacking an enemy weakness, he recommends ways to create that relative weakness through friendly action.



### Vegetius

As we saw in the discussion of *Mass*, Vegetius concerned himself a great deal with the goal of achieving relative combat power advantage and how best to attain local superiority through battle formations. Each of his recommendations comes with a decision criterion based upon the commander's estimate of the strengths of his own forces. All but one of these decision criteria represent various scenarios where the commander must choose how he will best array his forces given that he does not have the ability to have the advantage everywhere at once. This is essentially the concept of *Economy of Force* presented in a different manner. The interesting thing to keep in mind is that the two concepts are inextricably linked.

### Henri, Duke of Rohan

"Put the best troops on the wings and attack with the wing that is the strongest."<sup>58</sup>

Like other pre-twentieth century writers, Henri describes the concentration and dispersion of combat power in terms of battle formations. Here he recommends the placement of secondary forces in the center of the formation, implying that the significant action will take place on one wing and that the secondary forces can hold until that action is concluded.

### Clausewitz

"We must select for our attack one point of the enemy's position and attack it with great superiority, leaving the rest of his army in uncertainty but keeping it occupied. This is the only way that we can use an equal or smaller force to fight with advantage and thus with a chance of success. The weaker we are, the fewer troops we should use to keep the enemy occupied at unimportant points, in order to be as strong as possible at the decisive point."<sup>59</sup>

Although not stated as a principle, the key elements of *Economy of Force* are present. This is another example, however, of the inextricable linkage of *Economy of Force* to *Mass*. A force must mass, it is not strong everywhere, therefore it must minimize the force needed "to keep the enemy occupied at unimportant points."

### J.F.C. Fuller

“Every subsidiary operation should be related to the object, and effect a concentration of force on the day of decisive action.”<sup>60</sup>

For Fuller, *Economy of Force* is part of the principle of distribution, the idea that all parts of the battlefield should receive force commensurate with their relationship to the decisive action. It is noteworthy that while for him, too, the idea of economy is entirely an enabler for the idea of mass, he takes great pains not to raise it above other means of achieving concentration such as surprise and maneuver.

## The Principle of The Economy of Force and Other Cultures

### The United Kingdom

“Economy of Effort: The corollary of concentration of force is economy of effort. It is impossible to be strong everywhere and if decisive strength is to be concentrated at the critical time and place there must be no wasteful expenditure of effort where it cannot significantly affect the issue. In order to gain a substantial advantage a commander will have to take a calculated risk in a less vital area.”<sup>61</sup>

This statement explicitly links *Economy of Force* and *Mass*. It, like the US principle, wants all efforts to be used in the optimum manner. It identifies the need to know which parts of the operation are secondary or “less vital”. It is interesting to note that the British use the term force in their statement on *Mass*, but effort in their statement of *Economy of Force*. While once again this may be mere semantics, this implies a different quality to what is considered combat power and what is used to help generate a superiority of that combat power.

### France

“Economy of Force: Judicious distribution and application of resources in order to obtain the best cost versus benefit to achieve the objective.”<sup>62</sup>

The French statement includes the concept of “most effective” or optimal use of combat power, but does not discuss primary versus secondary efforts. The background discussion focuses on not committing all available combat power until the decisive action rather than committing minimum resources to non-vital areas while simultaneously hitting the enemy at a decisive point with maximum power. This is a subtle but interesting difference.

#### Russia

“Full use of the various means and capabilities of battle to achieve victory.”<sup>63</sup> This statement keys on the optimization of the use of combat power, but does not address the need to identify secondary or non-vital efforts in which to accept risk.

#### China

The Chinese principles of war do not include a separate principle of *Economy of Force*. It is an interesting mental exercise to imagine this is because they have traditionally had virtually unlimited manpower resources at their disposal.

#### Portugal

“Economy: The economy of moral and physical forces, in what is of secondary importance, is a condition to greater efficiency in what is decisive.”<sup>64</sup>

This statement includes the two key components from the US principle, that of identifying and accepting risk in non-vital areas and maximizing efficiency.

#### Simplicity

“Prepare uncomplicated concepts and plans and direct, concise orders to ensure thorough understanding.”<sup>65</sup>

This is one of the two principles that include a subordinate purpose (that is, besides achieving victory) in their definition. It is apparent that what is desired is thorough understanding, but there is a preliminary step wherein one must prepare clear plans and orders in order to achieve it.

## The Principle of Simplicity in Previous Centuries

### Sun Tzu, Vegetius, Henri, Clausewitz and Fuller

The specific recommendation to ensure understanding through simple and concise instructions does not appear in the works of these men. Perhaps they felt it obvious that orders should be made clear. Perhaps the uncomplicated nature of war, especially for those before Clausewitz, with small battlefields and battlelines entirely within the general's view did not make such a recommendation necessary. J.F.C. Fuller, the father of most of the US principles never includes it in any of his lists, nor is it present in the development of the British principles. In any case, this concept seems tied to our times.

### The Principle of Simplicity and Other Cultures

In fact, the concept is uniquely American. None of the other cultures surveyed, nor indeed any of the available sets of principles lists *Simplicity* save the US. Field Marshal Sir Bernard Montgomery does discuss the concept in some of his writings<sup>66</sup>, but it does not appear in J.F.C. Fuller's work or the British Field Regulations since the turn of the century. It is not a component of the British, French, Russian, Chinese or Portuguese principles of war. While this is fascinating, particularly considering that we as a military are not known for concise orders or uncomplicated plans, the 'why' of this phenomenon is beyond the scope of this study. It is enough that this principle can not be found in any other culture.

### Surprise

"Achieve effects disproportionate to the effort by taking unexpected action."<sup>67</sup>

This principle is unique in that it states what is to be gained by taking the recommended action. In each of the other definitions, one must surmise the effects of the action and then link those effects causally to victory. With Surprise, one knows one is getting more effect than the effort would indicate.

## The Principle of Surprise in Previous Centuries

### Sun Tzu

“Attack him where he is unprepared, appear where you are not expected.”<sup>68</sup> “He will win who, prepared himself, waits to take the enemy unprepared.”<sup>69</sup>

Sun Tzu’s commentary on *Surprise* is linked to his recurring theme of deception. The point of deception is to achieve *Surprise*, which in turn provides the user a significant advantage over the enemy. It is not an end unto itself and does not appear separately from discussions of deceptive measures.

### Vegetius

“Those designs are best which the enemy are entirely ignorant of till the moment of execution . . . Novelty and surprise throw an enemy into consternation.”<sup>70</sup>

Vegetius counsels us to use *Surprise* without describing for us exactly what we get out of it. He may have assumed that we would know the advantages to be gained.

### Henri, Duke of Rohan

Henri’s principles do not address the concept of *Surprise*. There might be two causes for this. First, battles in Henri’s time were rather set-piece affairs conducted by slow-moving armies in long, declared wars. The idea of strategic surprise may not have been in the lexicon. Second, he may have felt his admonishment to never let the enemy impose his will covered the idea of tactical surprise, at least from the point of view of the force on the receiving end.

### Clausewitz

“One of the strongest weapons of offensive warfare is the Surprise attack. The regular Surprise attack is the best way to get the most out of a very small army. [Surprise] is the most important element of victory.”<sup>71</sup>

Clausewitz’ ideas on *Surprise* are found in his principles for both offensive tactics and strategy. He spoke of it in reference to the additional power it gave the attacking army, what we would call today a

combat multiplier. He believed **Surprise**, as a component of any operation, increased chances for victory by making the attacker much more powerful than simply the sum of his combat forces.

#### J.F.C. Fuller

“The object of surprise is to attack the will of the enemy by accentuating fear.”<sup>72</sup>

This is another enabling principle. The effects of surprise increase combat power and therefore enable concentration. These effects also throw the enemy off-balance, facilitating the gaining or retention of the initiative. Much as the 1993 version of this principle began with the word “strike”, so too does Fuller’s discussion focus on offensive surprise. If it is presumed that the point of the unexpected action is to accentuate fear, that is to create a moral dislocation, then Fuller’s concept and our own are substantially similar.

### The Principle of Surprise in Other Cultures

#### United Kingdom

“Surprise: The potency of Surprise as a psychological weapon at all levels should not be underestimated. It causes confusion and paralysis in the enemy’s chain of command and destroys the cohesion and morale of his troops.”<sup>73</sup>

Not only do the British list **Surprise** as a principle of war, it is included as a major section of the chapter of their core doctrinal manual labeled “Requirements for Success”. Once again, they recommend this particular concept, not only as a guide to action, but as a key element in victory.

#### France

In keeping with their methodology, the French list **Surprise** as a central method for obtaining Freedom of Action. It is a condition, one of many, that is capable, alone or in concert with other activities and conditions, of producing the effects required by their key principle. It is therefore a guide to action seen as a component of success, without being considered a full-fledged principle.

### Russia

“Surprise, decisiveness, aggressiveness of military activity, continuous striving to achieve and maintain the initiative.”<sup>74</sup>

For the Russians, *Surprise* is linked to victory through initiative. It is seen as a means whereby initiative is gained or maintained. This is more indirect than other statements on *Surprise*, and the principle does not list the subcomponents of *Surprise* that define it as a military activity, but it is prescribed as a guide to action nonetheless.

### China

“Principle of the Surprise Attack: Climate, terrain and especially darkness must be used to the maximum advantage in springing attacks when and where the enemy least expects them.”<sup>75</sup>

This interesting commentary is again focused on *Surprise* as an offensive entity and it lists external conditions to be used in gaining *Surprise*. It does not explicitly state what this *Surprise* will do for the user, or how it can be obtained on the defense or without climate terrain or darkness. Surprisingly, it does not mention deception as a method for achieving *Surprise*.

### Portugal

The Portuguese principles do not list *Surprise* among them. *Surprise* is discussed in the text as a component of their principle of Security. This indicates that they are concerned that they are not surprised, but they do not separately recommend surprising the enemy as a guide to action. The discussion reads: “The moral shock produced by the fear of being killed is much greater when the actions which cause it are produced as a surprise.”<sup>76</sup>

Again, this is a supporting comment within the overall discussion of the reason for a principle of *Security*. It is surprising it is not also recommended as something to do to the enemy.

### Unity of Effort

“Achieve common purpose and direction through unity of command,

coordination and cooperation.”<sup>77</sup>

This is, unfortunately, another recursive definition. It still begs the question of what is unity of command. It also complicates matters by indicating a separate entity called ‘unity of effort’. The 1993 FM 100-5 stated the principle (Unity of Command) as: “For every objective seek unity of command and unity of effort.”<sup>78</sup>

This was no better. In fact, it can be argued as to which version is more vague. This study is looking for statements about linking military goals to one commander or chain of command. It is interesting to note that the new principle of *Unity of Effort* uses the word “command” in its definition but not “effort”, while the old principle of Unity of Command uses both.

### The Principle of Unity of Command in Previous Centuries

#### Sun Tzu

“He will win who has military capacity and is not interfered with by the sovereign.”<sup>79</sup>

Sun Tzu’s comments on *Unity of Effort* focus on the relationship of the commander and head of state. This is a theme discussed throughout his work. In his time and place, sovereigns (either nobles, bandits or both) often interfered with the most minute of military matters and this was a problem he sought to rectify. He does not really touch on a linkage of goal and single command entity.

#### Vegetius

Vegetius does not discuss *Unity of Effort*. This is interesting for one advising an emperor of the people who created Cannae. He does offer a passage on the proper placement of key leaders when the legions form for battle, giving each their principle duties, but no direct statement of the need to link each major objective or purpose to a single authority.

#### Henri, Duke of Rohan

“Have good leaders at the head of each principal corps.”<sup>80</sup>



Henri also does not have a separate principle for *Unity of Effort*. As Henri was a land forces commander fighting continental wars his whole life, it may be that this never became an issue. While it may be that this principle is tied to the concept of joint or combined operations, that would only make it useful, not universal.

#### Clausewitz

Clausewitz' Principles of War does not include a discussion of *Unity of Effort*. This may be for the same reasons as Henri.

#### J.F.C. Fuller

"The plan is arrived at through an intellectual process of foreseeing, reasoning, and deciding, and before it can be transformed into the activity of war, it must be given life. It is the general who verifies his plan by animating his instrument."<sup>81</sup>

Fuller's principle of determination is about generals getting the job done by ensuring their intent is known and executed throughout the command. In the long section about the problems associated with "councils of war", much is said that has the same language as a discussion of the merits of *Unity of Effort*. Fuller also has much to say about the ability of subordinates to break the plan by failing to understand or execute the will of the commander, "for whilst during peace-time soldiers are always talking about command, and the qualifications of the commander, the first thing they do when war is declared is to abrogate it."<sup>82</sup>

### The Principle of Unity of Command and Other Cultures

#### United Kingdom

The English equivalent to the concept of *Unity of Effort* is their principle of Cooperation that recommends "common aim" and "clear division of responsibilities" among arms, services and allies. It does not discuss unity of command or linkage of objective and command element.

### France

For the French, *Unity of Effort* is a condition under which the principles of war are applied successfully. This is somewhat like making the planning assumption that we will have created this condition as a routine part of our operations. It is clearly not a part of the “guides to action” from the French perspective.

### Russia

“Strict and uninterrupted leadership”.<sup>83</sup>

This is *Unity of Effort* run amok. Indications are that the Russians would like to break from the old mode of “finding ways to execute the plan as written in spite of difficulties”<sup>84</sup> as their definition of leader initiative, but that will remain difficult while operating their conscription system. They are, however, believers in the need to link each mission to one responsible commander.

### China

“Principle of Unity: . . . there must be a high command to follow the action and formulate overall plans for the campaign.”<sup>85</sup>

This principle has all of the key components of the old US principle. It links the overall goal to a single command authority.

### Portugal

There is no Portuguese principle of *Unity of Effort*. This is surprising given their earlier status as a world-wide maritime empire and their cooperation with Britain during the Napoleonic wars. It is presumed that they felt this to be a situation, and not a fundamental, concept.

### Exploitation

“Take advantage of and make lasting the effects of battlefield success.”<sup>86</sup>

This is a new principle. It can be surmised that the long-term effects of the Cold War defensive attitudes are beginning to wear off and that US doctrine writers have begun to look at operations in a more offensive manner. This does not explain, however, why this principle is missing between 1921 and 1950.

### The Principle of Exploitation in Previous Centuries

#### Sun Tzu

“Do not pursue an enemy who simulates flight; do not swallow a bait offered by the enemy . . . When you surround an army, leave an outlet free. This does not mean that the enemy is to be allowed to escape. The object is to make him believe there is a road to safety, and thus prevent his fighting with the courage of despair.”<sup>87</sup>

From these statements, it is clear that Sun Tzu’s armies considered pursuit as a normal result of successful operations, but he makes no specific recommendation concerning following up success.

#### Vegetius

“He who rashly pursues a flying enemy with troops in disorder, seems inclined to resign that victory which he had before obtained.”<sup>88</sup>

As with Sun Tzu, it seems that Vegetius expected pursuit as a result of operations, but felt it necessary to caution his audience on the negative aspects of a disorderly one. He does not have an explicit statement to make recommending exploitation of success. It is noteworthy that the nature of ancient warfare was such that most battles resulted in very little killing up until one side broke and ran. Then, the victor would cause the balance of the casualties in pursuing the routing foe. On occasion, the pursuer would lose control of forces on one part of the battlefield he needed to stave off overall defeat. There was no force on the ancient battlefield more difficult to control than a recently victorious unit who, after a hard fight, had their opponent flee before them. Sun Tzu and Vegetius appear to be of the mind

that pursuit is a normal component of ancient battle and that what needs recommending are warnings to its improper execution.

#### Henri, Duke of Rohan

“Do not allow pillage, but pursue until the enemy is completely beaten.”<sup>89</sup>

Although, like his predecessors, Henri feels it necessary to warn potential exploiters about losing control of their troops, he does explicitly recommend following up success through to final victory.

#### Clausewitz

“Generally speaking, the chief aim is the certainty (high probability) of victory, that is, the certainty of driving the enemy from the field of battle. The plan of battle must be directed toward this end. For it is easy to change an indecisive victory into a decisive one through energetic pursuit of a beaten enemy.”<sup>90</sup> “Only pursuit of the beaten enemy gives the fruits of victory.”<sup>91</sup>

Clausewitz recommends, as a guide to action, planning for success and continuing to engage a defeated foe to produce a conclusive victory.

#### J.F.C. Fuller

For Fuller, *Exploitation* is a subcomponent of his offensive action in that he advocated attacking the enemy throughout both the spatial depth of the battlefield, but also its temporal depth, and he would not have been satisfied with an attack that ceased in time with the enemy only partially beaten. While the idea of *Exploitation* is therefore not explicitly stated as a principle, he felt that “Pursuit produces the dividend of battle.”<sup>92</sup>

## The Principle of Exploitation and Other Cultures

### United Kingdom

There is no principle of *Exploitation* in the British Military Doctrine. It might be seen as a component to their principle of offensive action, but this is not explicitly stated in the discussion supporting that principle.

### France

The French do not have a principle of *Exploitation* or its equivalent. It is possible that they feel the concept of freedom of action, which includes the idea of anticipating battlefield results and preparing for them, sufficiently address this idea.

### Russia

There is no Russian principle of *Exploitation*. Their offensive doctrine discusses the concept of breakthrough in great detail, but does not qualify as a guide to action touting the follow-up to battlefield success.

### China

“Principle of Annihilation: It is better to destroy one opposing enemy than to harm ten; it is better strategically to annihilate one enemy division than to wound or even defeat two. Thus, a war of attrition is an inferior type of battle.”<sup>93</sup>

Although not a principle of *Exploitation*, this principle leads one to the same conclusion, albeit indirectly. If one does not ‘make lasting’ a battlefield success, then all that has been accomplished is attrition. By recommending annihilation as a guide to action, the Chinese are actually saying much the same thing.

## Portugal

The Portuguese have no equivalent to the principle of *Exploitation*, nor do any of their principles include this concept as a subcomponent.

## Security

“Never permit the enemy to acquire unexpected advantage.”<sup>94</sup>

This is another ‘advantage’ principle like *Maneuver* and *Mass*, only this time preventing the enemy from getting an advantage as opposed to creating one for ourselves.

## The Principle of Security in Previous Centuries

### Sun Tzu

“The spot where we intend to fight must not be made known . . . conceal your dispositions, and you will be safe from the prying of the subtlest spies, from the machinations of the wisest brains . . . Let your plans be dark and impenetrable as night.”<sup>95</sup>

Here the advantage the enemy is to be prevented from acquiring is from knowledge of friendly dispositions and plans. The statement of *Security* is not so limiting, so it must be presumed that it means any and all methods for the enemy to acquire advantage.

### Vegetius

“But of all precautions the most important is to keep entirely secret which way or by what route the army is to march. . . the designs of a general should always be impenetrable.”<sup>96</sup>

Vegetius also feels it important to protect friendly plans from the enemy, but does not address any other areas to be concerned with protecting.

### Henri, Duke of Rohan and Clausewitz

Neither of these authors lists a principle related to **Security**. It can be presumed that neither were significantly affected by a lack of security during their careers. It is interesting that Clausewitz, so focused on the fog and friction of war, would not speak to protection of forces in his Principles.

### J.F.C. Fuller

“Security, therefore, may be ... considered as simply a means of gaining time at the expense of the enemy.”<sup>97</sup>

Fuller focuses on the idea of protection as a means to enable offensive action and concentration and not preventing the enemy gaining an advantage. In fact, he might better have labeled his principle protection, so strong is this core idea. His concept of protection centers on shielding one’s force while preparing to strike the decisive blow and is more in line with our force protection as a component of combat power.

## The Principle of Security and Other Cultures

### United Kingdom

“Security: A degree of security by physical protection and information denial is essential to all military operations.”<sup>98</sup> This statement does not directly reference the enemy or an advantage to prevent him from obtaining. It does indicate more than one aspect of an operation that needs protecting, something the US principle implies.

### France

For the French, **Security** is a component of their Freedom of Action. They obtain Freedom of Action in part by not permitting the enemy to surprise our forces. This implies that it is not general advantage that we must deny the enemy, but that specifically derived from surprise action.

### Russia

“Comprehensive security of combat activity.”<sup>99</sup>

The Russians also indicate the need to protect much more than plans and dispositions if what is meant here is any activity related to the operation. They do not explicitly identify the need to prevent the enemy gaining an advantage other than surprise.

### China

Interestingly, there is no Chinese principle of war for **Security**. It is possible that Sun Tzu’s focus on the subject make it seem obvious to Chinese theorists.

### Portugal

There are two Portuguese principles of war that address the same aspects as our principle of **Security**: “Secrecy: Secrecy about our own forces expends the nervous energy of the enemy and makes it difficult for him to take suitable dispositions.” and “Security: All commanders must guarantee the space and time indispensable for preparation and deployment for battle.”<sup>100</sup>

These principles together address the concept of the enemy is not acquiring an advantage, either restricting one’s freedom of action, similar to the French concept, or taking suitable dispositions against one’s forces. Neither explicitly states anything to be protected beyond “our own forces”.

### Morale

“Build, maintain and restore fighting spirit.”<sup>101</sup>

This is the other of the two new principles proposed as additions in the 1997 draft of FM 100-5. As with Exploitation, it would seem current doctrine writers have been given more freedom to explore fundamental concepts than those in the past. This principle does not exist in Army manuals before this one.



## The Principle of Morale in Previous Centuries

### Sun Tzu

From his “Seven Considerations:” “Which of the two sovereigns is imbued with the Moral Law? On which of the two sides is discipline most rigorously enforced? In which army is there the most absolute certainty that merit will be rewarded and misdeeds summarily punished?”<sup>102</sup>

From the chapter “On Waging War.” “When you engage in actual fighting, if victory is long in coming, the men’s weapons will grow dull and their ardor will be dampened . . . Now, in order to kill the enemy, our men must be roused to anger.”<sup>103</sup>

From the “Five Essentials for Victory:” “He will win whose army is animated by the same spirit throughout all its ranks.”<sup>104</sup>

Sun Tzu would have approved of the addition of **Morale** to the US principles of war. In his comments we find recommendations about the building, maintaining and restoration of the mental state necessary to combat.

### Vegetius

“Valor is superior to numbers . . . Men must be sufficiently tried before they are led against the enemy . . . Few men are born brave, many become so through care and force of discipline . . . Troops are not to be led to battle unless confident of success.”<sup>105</sup>

In the first statement, Vegetius indicates why it is **Morale** is important. In the second, he states methods for building fighting spirit. In the third, he tells how to maintain and restore that spirit. In the fourth, he indirectly refers to the negative effects a lack of confidence can have and strengthens his argument for the need of fighting spirit.

### Henri, Duke of Rohan

“Arrange your army in battle in a manner that enables you to renew the fighting several times with ordered troops.”<sup>106</sup>

Henri is saying indirectly that fresh troops are critical to the fight. He did not mean just rested or supplied, but also that troops that have been fighting long have a disadvantage against those just joining battle from a mental standpoint.

### Clausewitz

Although he has much to say about the moral component of war in On War, Clausewitz does not have a separate principle of war for *Morale*. Instead, considerations of spirit and morale are frequently found as either enablers or objectives of the actions described in his principles. He felt it important, but curiously did not feel it important enough to make it a separate guide to action in a group of such guides that details such things as the provisioning of troops and the defensive use of large rivers.

### J.F.C. Fuller

“This balancing process [between self-sacrifice and self-preservation] depends on the influence of the moral conditions of war on the instinct of self-sacrifice, which like every other instinct, must be brought under the dominion of the will, if the will is to be a free agent. The principle which governs these influences is the principle of endurance.”<sup>107</sup>

Fuller’s endurance means the ability to resist all of the influences of war so they will not prevent accomplishment of the mission. This is more like *Security* or force protection than an emphasis on fighting spirit. It is also reminiscent of the Portuguese principle of perseverance. It does not have an active component of creating and keeping spirit as a combat multiplier and seems more a defensive or protective measure.

## The Principle of Morale and Other Cultures

### United Kingdom

“Maintenance of Morale: Because success in war depends as much on moral as physical factors, morale is probably the single most important element of war. High morale fosters the offensive spirit and the will to win.”<sup>108</sup>

It is interesting that although it is now a part of British military theory, the principle of *Morale* did not come from J.F.C. Fuller but resulted from discussions and writings post-WWII. In any case, maintaining offensive spirit is recommended by the modern British principles.

### France

*Morale* is not a French principle of war. It is also not an explicitly stated component of one of the principles. It may be that their experience with an over-reliance on *elan* kept them from including it in their theory.

### Russia

“Calculation and full exploitation of the moral-political factor”<sup>109</sup>

In their literature, the Russians focus on this principle as something to do to the enemy. They are less concerned with their own morale. This may be the result of being a conscript force and having little ability to generate combat power through the fighting spirit of their forces. Therefore, though they seem to address it, this is not supportive of *Morale*.

### China

“Principle of the military spirit: The most important attribute of a victorious army is the military spirit. In every conceivable way, thought of possible defeat must be eliminated from the army and replaced with an iron will to win.”<sup>110</sup>

This principle is much like the US one. It emphasizes the need for fighting spirit and recommends building and sustaining it.

## Portugal

There is no separate principle of *Morale* for the Portuguese. While their principle of perseverance (discussed in Objective) serves some of the same purpose, there is no recommendation to focus effort on creating and keeping fighting spirit.

## Summary

In this chapter the US principles of war were compared to similar concepts from history as well as other cultures. It is evident that there is not a one-to-one correlation of principles throughout time and across cultural boundaries. The next chapter will discuss the implications of these findings.

---

<sup>1</sup> US Army, FM100-5 (1997), II-2-2.

<sup>2</sup> Sun Tzu, 14.

<sup>3</sup> Sun Tzu, 15.

<sup>4</sup> Alger, 199.

<sup>5</sup> Clausewitz, 349.

<sup>6</sup> Clausewitz, 316.

<sup>7</sup> Clausewitz, 323.

<sup>8</sup> J.F.C. Fuller, The Foundations of the Science of War (Ft. Leavenworth, KS: USACGSC Press, 1993), 231.

<sup>9</sup> UK Ministry of Defence, Design for Military Operations: The British Military Doctrine (London: Chief of the General Staff, 1996), A-4. Hereafter, BMD.

<sup>10</sup> E.M.A.T., Instruction Generale sur l'emploi des Forces Terrestres (Paris: French Army Staff, 1994), 3/3. Hereafter EMAT.

<sup>11</sup> William P. Baxter, Soviet Airland Battle Tactics, (Novato, CA: Presidio, 1986), 23. Although the Soviet principles of war are not the subject of this work per se, it presents one of the cleanest translations of them.

<sup>12</sup> Alger, 259.

<sup>13</sup> Frederico da Costa Lopes Silva, The Principles of War (Lisbon, Portugal: Army General Staff, 1956), 11.

<sup>14</sup> US Army, FM 100-5, 1997, II-2-2.

<sup>15</sup> Sun Tzu, 19.

<sup>16</sup> Sun Tzu, 25.

<sup>17</sup> Vegetius, Military Institutions of the Romans, ed.: T.R. Philips in Roots of Strategy (Harrisburg, PA: Stackpole, 1985), 172.

<sup>18</sup> Alger, 199.

- 
- <sup>19</sup> Clausewitz, 318.
- <sup>20</sup> Clausewitz, 319.
- <sup>21</sup> Fuller, 283.
- <sup>22</sup> BMD, A-2.
- <sup>23</sup> EMAT, 3/5.
- <sup>24</sup> Baxter, 23.
- <sup>25</sup> Alger, 259.
- <sup>26</sup> US Army, FM 100-5, 1997, II-2-3.
- <sup>27</sup> US Army, FM 100-5, 1997, II-2-3.
- <sup>28</sup> Sun Tzu, 11.
- <sup>29</sup> Sun Tzu, 26.
- <sup>30</sup> Vegetius, 160-164.
- <sup>31</sup> Alger, 199.
- <sup>32</sup> Clausewitz, 325-6.
- <sup>33</sup> Fuller, p. 250
- <sup>34</sup> EMAT, 3/5.
- <sup>35</sup> Baxter, 24.
- <sup>36</sup> Alger, 258.
- <sup>37</sup> Silva, 11.
- <sup>38</sup> US Army, FM 100-5, 1993, 2-9.
- <sup>39</sup> US Army, FM 100-5, 1993, 2-9.
- <sup>40</sup> US Army, FM 100-5, 1993, 2-9.
- <sup>41</sup> US Army, FM 100-5, 1997, II-2-3.
- <sup>42</sup> Sun Tzu, 10.
- <sup>43</sup> Sun Tzu, 17.
- <sup>44</sup> Sun Tzu, 20.
- <sup>45</sup> Sun Tzu, 26.
- <sup>46</sup> Vegetius, 162, 173.
- <sup>47</sup> Alger, 259.
- <sup>48</sup> Clausewitz, 316.
- <sup>49</sup> Fuller, 261.
- <sup>50</sup> BMD, A-2.
- <sup>51</sup> EMAT, 3/3.
- <sup>52</sup> Baxter, 23.

- 
- <sup>53</sup> Alger, 258.
- <sup>54</sup> Silva, 11.
- <sup>55</sup> FM 100-5, 1997, II-2-3.
- <sup>56</sup> Sun Tzu, 27.
- <sup>57</sup> Sun Tzu, 28.
- <sup>58</sup> Alger, 199.
- <sup>59</sup> Clausewitz, 325.
- <sup>60</sup> Fuller, 296.
- <sup>61</sup> BMD, A-3.
- <sup>62</sup> EMAT, 3/4.
- <sup>63</sup> Baxter, 23.
- <sup>64</sup> Silva, 11.
- <sup>65</sup> FM 100-5, 1997, II-2-5.
- <sup>66</sup> Bernard L. Montgomery, "High Command in War", unpublished paper, June 1945.
- <sup>67</sup> FM 100-5, 1997, II-2-5.
- <sup>68</sup> Sun Tzu, 11.
- <sup>69</sup> Sun Tzu, 17.
- <sup>70</sup> Vegetius, 172.
- <sup>71</sup> Clausewitz, 330, 351.
- <sup>72</sup> Fuller, 273.
- <sup>73</sup> BMD, A-2.
- <sup>74</sup> Baxter, 23.
- <sup>75</sup> Alger, 259.
- <sup>76</sup> Silva, 11.
- <sup>77</sup> FM 100-5, 1997, II-2-6.
- <sup>78</sup> FM 100-5, 1993, 2-5.
- <sup>79</sup> Sun Tzu, 18.
- <sup>80</sup> Alger, 199.
- <sup>81</sup> Fuller, 238.
- <sup>82</sup> Fuller, 240.
- <sup>83</sup> Baxter, 24.
- <sup>84</sup> Baxter, 25.
- <sup>85</sup> Alger, 259.
- <sup>86</sup> FM 100-5, 1997, II-2-7.

- 
- <sup>87</sup> Sun Tzu, 35.
- <sup>88</sup> Vegetius, 172.
- <sup>89</sup> Alger, 200.
- <sup>90</sup> Clausewitz, 326.
- <sup>91</sup> Clausewitz, 351.
- <sup>92</sup> Fuller, 291.
- <sup>93</sup> Alger, 259.
- <sup>94</sup> FM 100-5, 1997, II-2-7.
- <sup>95</sup> Sun Tzu, 27-32.
- <sup>96</sup> Vegetius, 134.
- <sup>97</sup> Fuller, 320.
- <sup>98</sup> BMD, A-2.
- <sup>99</sup> Baxter, 24.
- <sup>100</sup> Silva, 11.
- <sup>101</sup> FM 100-5, 1997, II-2-8.
- <sup>102</sup> Sun Tzu, 10.
- <sup>103</sup> Sun Tzu, 12.
- <sup>104</sup> Sun Tzu, 17.
- <sup>105</sup> Vegetius, 171-2.
- <sup>106</sup> Alger, 199.
- <sup>107</sup> Fuller, 304.
- <sup>108</sup> BMD, A-2.
- <sup>109</sup> Baxter, 24.
- <sup>110</sup> Alger, 259.

## CHAPTER 4

### CONCLUSIONS

This chapter will address each principle in turn, discussing whether or not it passes the 'test' for candidacy as a Principle of Victory (defined in chapter 1). Second, if the analysis has identified a principle as needing only minor adjustment to meet the requirements of a PV, it will recommend the wording of such an entirely new or combined principle.

#### Objective

The group of past theorists attacked the problem of the goal of military operations from a slightly different perspective than that in the wording of the 1997 US principle. The ancient writers recommended not fighting for fighting's sake, that there should be some final utility in battle beyond ego or glory. Clausewitz and Fuller focus on the probability that something besides simple battlefield victory is the point of the exercise such as material or territorial gain or raw political influence. They agree on the need to identify the goal, which is a key component of the modern definition.

Of the five cultures studied, four include the concept of defining and moving towards a unifying goal. Notably, the French and Russians do so by naming that goal as the point behind concentrating combat power.

***Objective***, in its 1997 form, is recommended as a Principle of Victory.

#### Offensive

Across all time periods and cultures, there is consensus on the need to impose one's will on the enemy by seizing, retaining and exploiting the initiative. This is also a Principle of Victory, however, the



name of the principle to should be changed to *Initiative* to avoid the confusion inherent with the name *Offensive*.

### Maneuver

This was the major surprise. The Army has always emphasized the role of maneuver and its much-valued characteristics of speed and flexibility. However, the theorists speak only or mainly of dispositions not maneuver. More surprising is that three of the five cultures do not have it as a principle at all and the other two only as a means of achieving concentration.

The effect of maneuver is to flexibly apply combat power to put the enemy in a position of disadvantage, but what is that position of disadvantage and what is it's purpose? The purpose of that disadvantage is a mismatch in combat power in US forces' our favor, making *Maneuver* a means to achieve *Mass*. This is the Russian and Chinese version of the principle.

If not a Principle of Victory, what then, is left for *Maneuver*? As both it and *Economy of Force* share a special place as important means to achieve *Mass*, it is recommended that both be incorporated into a new definition of *Mass*.

### Massed Effects

The elements of the principle of *Mass* (concentration, higher relative combat power, decisive time and place) exist across all of the cultures studied. They also can be found, although sometimes in embryonic form, and often de-emphasized relative to other means to produce victory, in theoretical writings throughout history. The US principle is not lacking any of the key components uncovered in this study, but does not include references to the goal or mission and is not explicitly stated as relying on some principle of *Economy of Force* or *Maneuver*.

It does meet the test of this author, however, and meets the requirements to serve as a Principle of Victory. Its linkage to *Maneuver* and *Economy of Force*, however, should result in an adjusted wording. As noted in the first chapter, the short titles of these very important concepts often cause a

great deal of trouble. Since all agree that it is not simply quantity of material that is referenced in this principle but the combined effects of all components of combat power, the word 'Mass' is misleading. What is really sought is an advantage in combat power so great as to be irresistible. Too, the definition of *Maneuver* focuses on placing the enemy in a position of disadvantage. after the concluding remarks on those principles.

It is recommended that *Mass* be renamed *Advantage* with the following new definition that incorporates the roles of *Maneuver* and *Economy of Force*:

#### Advantage

Through maneuver and economy of force, achieve a decisive advantage in the effects of combat power at the point in time and space that best accomplishes the goal.

Note that this definition accomplishes one other task. It aims to solve the age-old Mass problem of what is the 'right time and place'. Since what is sought is to best and most effectively reach the goal or objective, this definition takes a cue from the French and Russians and links the 'why' of gaining advantage to the overall point of the military action.

#### Economy of Force

This is a difficult principle to reckon with. While all the theorists studied and each culture but China specifically identified this concept, in all cases it was as a means of achieving concentration of combat power or *Mass*. While this would make the idea of *Economy of Force* a Principle of Victory as identified by the established test, it probably does not warrant a separate identity.

#### Simplicity

As no theorist or culture in the research design includes the concept of simple plans as a fundamental of war, it should not be included as a Principle of Victory.

### Surprise

Along with Mass, Surprise was found to be recommended as a guide to action throughout time and across all cultures. It is recommended in its 1997 form as a Principle of Victory.

### Unity of Effort

This concept does not appear as a principle in any of the time periods studied. Sun Tzu and Fuller advise that military operations match what the political leadership intends, but do not address the linkage of military objective to a single chain of command.

Only the Chinese have such a principle. The British and Russians have principles that focus on cooperation between services and branches, but do not tie this concept to an organizational structure.

*Unity of Effort* is not recommended as a Principle of Victory.

### Exploitation

All of the theorists studied had something to say, directly or indirectly, about pursuing or 'finishing off' the enemy. Quite often in the past, apparently defeated enemy forces have returned to destroy the short term victor. It is also true that rash pursuits have just as often been the downfall of armies that otherwise might have carried the day. The other cultures of present times, however, do not have a similar fundamental focused on converting short-term success into victory. This may be either due to the thought that this may be too much a statement of the obvious or, more likely, that the principle of the *Objective* already embodies this concept. If all actions are directed towards a decisive goal, does that not include the ones you take at the point of temporary battlefield success?

While understanding the motivation of the FM 100-5 authors, *Exploitation* is not recommended as a Principle of Victory.

### Security

The majority of time periods and cultures studied make strong recommendations about concealing our actions and plans from the enemy. Still, the US definition is troubling. The US wants to prevent the enemy from gaining an unexpected advantage. Does this mean that it is acceptable to permit the enemy an expected advantage? Too, if relative advantage is sought, is this not a component of the old principle of *Mass*? A redefinition may be in order here as well:

Security: Conceal friendly actions and intent from the enemy.

This definition removes the concept of relative advantage and leaves it to the new principle of the same name while restating the principle in line with both the intent of its original form and with past statements and other cultures.

### Morale

So universally noted is this concept in the research, it is puzzling why it is only the 1997 draft of FM 100-5 that brings it into American theory. This may be the biggest contribution of the relook of the principles by the FM 100-5 team and it is recommended it in its 1997 form as a Principle of Victory.

### Summary

These, then, are the Principles of Victory; the concepts I recommend are a starting point to an enduring military theory:

***Objective.*** Direct every military operation toward a clearly defined, decisive and attainable objective.

***Initiative.*** Seize, retain and exploit the initiative.

***Advantage.*** Through maneuver and economy of force, achieve a decisive advantage in the effects of combat power at the point in time and space that best accomplishes the goal.

***Security.*** Conceal friendly actions and intent from the enemy.

***Surprise.*** Achieve effects disproportionate to the effort by taking by taking unexpected action.

***Morale.*** Build, maintain and restore fighting spirit.

### The Future

The work in this area is far from complete. While I am satisfied we have determined which of our principles can serve in an enduring military theory, there may be others that need to join the group. I would recommend the following actions to anyone continuing research in this area:

1. Examine the role of the concept of ***Maneuver*** more thoroughly. By incorporating it into my principle of ***Advantage***, but not recommending its removal as a component of combat power, I have indicated it can serve as both. Is this correct?

2. Examine the core ideas behind ***Simplicity*** and ***Exploitation*** to see if it is their definition in words that prevented them from being recommended. In the case of ***Simplicity***, for example, we might need to carefully define it away from plans and orders. Is Operation Overlord a complex plan or a simple concept?

3. Examine the role of intelligence and information as possible enduring principles. I was surprised to see that no one has a principle of information or one for intelligence gathering. Is this because these concepts are 'too' obvious?

### Conclusion

The introduction to this paper included the following figure:

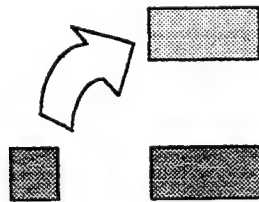


Fig 3

It also asked the reader to identify the boxes; were they Roman cohorts, US corps or some other formation? Conceptually, it can be argued that they can represent any of these or, in fact, any manifestation of combat power. Figure 3 is essentially a graphic representation of one method of achieving *Advantage*. The fact that it can be used for the forces of any time period or size of battlefield is a simple way of speaking to the universality of the idea as well as to its usefulness. As an example, one could show this graphic to students of a basic military theory course and ask them to identify the components. Too, one could place it on the doctrine writer's wall as a reminder that it is always *Advantage* that is sought--it is simply his job to determine how to get it with the forces of today. Similar methods could be used for any other such principle, allowing military commanders a conceptual outline for planning and execution that utilized timeless components of success.

That is the long-term goal of this study: to set the framework for the development of an enduring military theory. It used the US principles of war as a starting point and sought to develop from them, if possible, a set of initial universal principles that could serve as guides to action for those seeking victory.

It is believed this goal was achieved.

## BIBLIOGRAPHY

### Books

- Addington, Larry H. The Patterns of War Since the Eighteenth Century. 2d ed. Indianapolis: Indiana Univ. Press, 1994.
- Alexander, Bevin. How Great Generals Win. New York: Norton, 1993.
- Alger, John I. The Quest for Victory: The History of the Principles of War. Westport, CT: Greenwood Press, 1982.
- Atkeson, E. B. The Final Argument of Kings: Reflections on the Art of War. Fairfax, VA: HERO Books, 1988.
- Baxter, William P. Soviet Airland Battle Tactics. Novato, CA: Presidio, 1986.
- Burne, Alfred H. The Art of War on Land. Harrisburg, PA: Military Service Publishing, 1958.
- Chervonobab, V. P. "Principles of Military Art and Their Development." Selected Readings in Military Thought 1963-1973 (1986): 132-144.
- Clausewitz, Carl von. On War. NY: Viking Penguin, 1968.
- Cleary, Thomas. The Japanese Art of War. Boston: Shambala, 1992.
- \_\_\_\_\_. Mastering the Art of War. Boston: Shambala, 1989.
- du Picq, Col. Ardant. "Etudes sur le Combat." in Roots of Strategy: Book 2. 9-300. Trans. Col. John N. Greely and Maj. Robert C. Cotton. Harrisburg, PA: Stackpole Books. 1987.
- Dupuy, T. N. Numbers, Predictions and War. Fairfax, VA: HERO Books, 1985.
- \_\_\_\_\_. Understanding War: History and Theory of Combat. NY: Paragon, 1987.
- Falls, Cyril. The Art of War. From the Age of Napoleon to the Present Day. New York: Hesperides, 1961.
- Foch, Ferdinand. The Principles of War. Trans. J. DeMorinni. New York: AMS Press, 1970.
- Fuller, J. F. C. The Foundations of the Science of War. Ft. Leavenworth, KS: USACGSC Press, 1993.

- Gat, Azar. The Origins of Military Thought: From the Enlightenment to Clausewitz. Oxford: Clarendon Press, 1989.
- Garthoff, Raymond L. Significant Features of Soviet Military Doctrine. Santa Monica: RAND Corp., 1954.
- Herbert, Paul H. Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations. Ft Leavenworth: Combat Studies Institute, 1988.
- House, Jonathan M, USA. Toward Combined Arms Warfare: A Survey of Tactics, Doctrine and Organization in the 20th Century. Ft. Leavenworth, KS: Combat Studies Institute, 1984.
- Johnsen, William T. (et al) The Principles of War in the 21st Century: Strategic Considerations. Carlisle Barracks, PA: USAWCSSI, 1995.
- Jomini, Henri. "Precis de L'art de la Guerre." in Roots of Strategy: Book 2. Pp.389-557. ed. BG J. D. Hittle, USMC(Ret.). Harrisburg, PA: Stackpole Books. 1987.
- Kagan, Donald. On the Origins of War. New York: Doubleday, 1995.
- Leonhard, Robert R. The Art of Maneuver. Novato, CA: Presidio, 1991.
- Lider, Julian. Military Theory: Concepts, Structure, Problems. New York: St. Martin's Press, 1983.
- \_\_\_\_\_. Origins and Development of West German Military Thought. Brookfield, VT: Gower, 1986.
- Lupfer, Timothy T. The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War. Ft. Leavenworth: Combat Studies Institute, 1981.
- Luttwak, Edward N. The Pentagon and the Art of War. NY: Simon and Schuster, 1985.
- Machiavelli, Niccolo. The Art of War. NY: Da Capo, 1990.
- Mrazek, James. The Art of Winning Wars. NY: Walker and Co.:1968.
- O'Connell, Robert L. Of Arms and Men. NY: Oxford University Press, 1989.
- Oman, C.W.C. The Art of War in the Middle Ages. Ithaca, NY: Cornell University Press, 1953.
- Phillips, T. R., ed. Roots of Strategy. Harrisburg, PA: Stackpole, 1985. (Includes Sun Tzu's The Art of War, Vegetius' Military Institutions of the Romans, de Saxe's Art of War, Frederick's Instructions and Napoleon's Maxims.)
- \_\_\_\_\_. Roots of Strategy, Book 3. Harrisburg, PA: Stackpole, 1991. (Includes von Leeb's Defense, von Freytag-Loringhoven's The Power of Personality in War and Erfurth's Surprise.)
- Romjue, John L. From Active Defense to Airland Battle: The Development of Army Doctrine 1973-1982. Fort Monroe, VA: USATRADOC, 1984.
- Sawyer, Ralph D. ed. and trans. The Seven Military Classics of Ancient China. San Francisco: Westview Press, 1993.



- Scott, Harriet F. and William F. Scott. The Soviet Art of War: Doctrine Strategy and Tactics. Boulder, CO: Westview Press, 1982.
- Silva, Frederico da Costa Lopes. The Principles of War. Lisbon, Portugal: Army General Staff, 1956.
- Tse-Tung, Mao. On Protracted War. Peking: Foreign Language Press, 1967.
- Van Creveld, Martin. The Training of Officers. NY: The Free Press, 1990.
- \_\_\_\_\_. Technology and War. NY: The Free Press, 1989.
- \_\_\_\_\_. The Transformation of War. NY: Free Press, 1991.
- Voysey, LTC R. A. E. An Outline of the Principles of War. London: DISS Publishing, 1934.

#### Periodicals

- Beaumont, Roger A. "The Principles of War Revisited." Military Review 52 (Dec 72): 63-69.
- Campbell, John W. "Evolution of a Doctrine: The Principles of War." Marine Corps Gazette 54 (1970): 39-42.
- Conolly, R. L. "The Principles of War." Military Review 33 (May 53): 22-32.
- Delamer, Guillermo R. "Strategic Keyboard: A Model to Relate the Principles of War." Naval War College Review 44/4 (1991): 96-107.
- Edmond, Emil V. B. "The First Principle of War" Military Review 41 (Feb 61): 12-15.
- Fallwell, Marshall L. "The Principles of War and the Solution of Military Problems." Military Review 35 (May 55): 48-62.
- Mann, Edward. "One Target, One Bomb – Is the Principle of Mass Dead?" Airpower Journal 7, no. 1 (1993): 35-43.
- Metz, Steven. "Wake for Clausewitz: Toward a Philosophy of 21<sup>st</sup> Century Warfare" (review essay). Parameters 24, no. 4 (1995): 126-132.
- Shepard, John E. Jr. "On War: Is Clausewitz Still Relevant?" Parameters 20, no. 3 (1990): 85-99.

#### Government Publications

- E.M.A.T. Instruction Generale sur l'emploi des Forces Terrestres. (French Army Field Manual #106) June 1994.
- Sri Lankan Army HQ. Tactics Theory (Basic Tactics) Pamphlet 0107. SLA HQ, 1995.

UK Ministry of Defence. Design for Military Operations: The British Military Doctrine. London: Chief of the General Staff, 1996.

UK Ministry of Defence. Operations. London: Directorate General Land Warfare, 1993.

US Army. FM 100-5, Operations. Washington, DC: GPO, 1976, 1982, 1986, 1993, 1997 (coordinating draft).

US Military Academy, Dept. of History. Definitions and Doctrine of the Military Art. West Point, NY: USMA Press, 1979.

#### Unpublished Works

Atcheson, Gordon F. Airland Battle Doctrinal Tenets in Operational Art: Do We Need an Output-Oriented Tenet that Focuses on the Enemy? Ft. Leavenworth, KS: USACGSC SAMS Monograph, 1990.

Barbour, Mark Q. "An Analysis of Soviet Doctrine Using the Principles of War." Report. Air War College, 1989.

Edwards, Britt Lynn. Reforming the Army: The Formulation and Implementation of Airland Battle 2000. Diss. U. of California, 1985.

Melody, Paul E. The Principles of War and Campaign Planning: Is There a Connection? Ft. Leavenworth, KS: USACGSC SAMS Monograph, 1990.

## INITIAL DISTRIBUTION LIST

Combined Arms Research Library  
US Army Command and General Staff College  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

Defense Technical Information Center  
Cameron Station  
Alexandria, VA 22314

SFC John T. Broom  
CSI  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

LTC Richard D. Graham  
DJCO  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352

MAJ Thomas B. Lyles  
CTAC  
USACGSC  
1 Reynolds Ave.  
Fort Leavenworth, KS 66027-1352